

STRAWBERRY VARIETY NAMED 'BRUNSWICK'

BACKGROUND OF THE INVENTION

The present invention includes a new and distinct cultivar of *Fragaria ananassa* known by the varietal name 'Brunswick', originally designated as "K90-12". The new variety resulted from a controlled cross in an ongoing breeding program between the strawberry plants 'Cavendish' (Plant Patent No. 11,110) and 'Honeoye' (unpatented). 'Cavendish' was developed by the Atlantic Food and Horticulture Research Centre (a facility of Agriculture and Agri-Food Canada) in Kentville and 'Honeoye' was developed by the New York State Agricultural Experiment Station in Geneva. 'Brunswick' was discovered in 1990 as a seedling in a controlled breeding plot near Sheffield Mills, Nova Scotia at the Sheffield Farm, a field-station of the Atlantic Food and Horticulture Research Centre, where it was selected and propagated asexually by stolons at the Atlantic Food and Horticulture Research Centre in Kentville. Asexual propagules from this original source have been produced annually in a greenhouse at the Atlantic Food and Horticulture Research Centre, Kentville, Canada. 'Brunswick' has been tested at the Atlantic Food and Horticulture Research Centre (starting in 1991) and also at research centres in Charlottetown, Prince Edward Island, Buctouche, New Brunswick, Fredericton, New Brunswick, and Pynn's Brook, Newfoundland, all of Canada. This propagation and testing has demonstrated that the combination of traits disclosed herein which characterize the new variety are fixed and retained true to type through successive generations of asexual reproduction via stolons.

DESCRIPTION OF THE DRAWINGS

FIG.1 shows plant parts of the new variety, typical in size, shape, and color;
and
FIG.2 shows the flowers of the new variety.

DESCRIPTION OF THE PLANT

The following detailed botanical description of the new variety is based upon measurements and observations taken of plants and fruit grown in Kentville, Nova Scotia, Canada. Observations were taken from each variety as grown in a side-by-side field trial. Color designations, color descriptions, and other phenotypical descriptions may deviate from the stated values and description depending upon variation in the environment, seasonal, climatic and cultural conditions, however, it is believed that this description will apply to the 'Brunswick' plants grown in similar conditions of soil and climate elsewhere. Color references generally are made to the R.H.S. Colour Chart of the Royal Horticultural Society of London (1966 edition). Descriptive information on the new variety is presented in Tables 1 and 2. In the tables, the flowers described are secondary flowers. The fruit described is the secondary fruit of the maiden crop, thirteen or fourteen months after planting. The harvest data in Table 3 is based on a complete harvest of the crop. Principal differences between 'Brunswick', the patented variety 'Cavendish' and the unpatented variety 'Honeoye' are set forth.

Classification: The new variety is botanically identified as *Fragaria ananassa* and commercially classified as a short-day strawberry.

Plant and Foliage Characteristics: When propagated in the nursery, 'Brunswick' produces moderate numbers of runner plants, similar to 'Cavendish' but less than 'Honeoye'. Individual plants of all three varieties are medium in size. The plants of 'Brunswick' are of medium density with globose habit and strong vigor. 'Brunswick' rows are less dense and more open than rows of 'Honeoye', but more dense than 'Cavendish'. As shown in Table 1, leaf color of 'Brunswick', 'Cavendish' and 'Honeoye' are Green Group 137A on the upper

surface. The color of the lower surface of 'Brunswick' and 'Honeoye' is Green Group 138B but Green Group 137C for 'Cavendish'. Leaflets of 'Brunswick' are larger than 'Cavendish' and slightly larger than 'Honeoye' and leaves of all three varieties have three leaflets. Leaflets of 'Brunswick' and 'Cavendish' are cupped whereas 'Honeoye' leaflets are flat. Leaflets of 'Brunswick' and 'Cavendish' have higher numbers of serrations than 'Honeoye'. Leaflet serrations of 'Brunswick' and 'Honeoye' are semi-round whereas serrations of 'Cavendish' are rounded. The venation of 'Brunswick' leaflets is pinnate. Petiole pubescence for 'Brunswick' tends to be higher in density than for 'Cavendish' and 'Honeoye' but all three varieties have a perpendicular orientation of the pubescence.

TABLE 1

Foliar Characteristics for 'Brunswick', 'Cavendish' and 'Honeoye'			
Foliar Character	Cultivar		
	'Brunswick'	'Cavendish'	'Honeoye'
Leaf color	Green Group	Green Group	Green Group
Upper surface	137A	137A	137A
Lower surface	138B	137C	138B
Central leaflet			
Length (mm)			
Mean	87.8	79.9	83.8
Range	80-100	64-89	65-97
Width (mm)			
Mean	77.0	74.6	70.3
Range	65-95	55-90	55-87
Length/width ratio	1.14	1.07	1.19
No. leaflets/leaf	3	3	3
Leaf convexity	cupped	cupped	flat
Serrations			
Number	many	many	moderate
Size	medium	medium	small
Shape	semi-round	rounded	semi-round
Tip serration size	small	small	small
Leaf pubescence	medium	medium	medium
Petiole pubescence			
Density	medium to dense	medium	medium
Direction	perpendicular	perpendicular	perpendicular

Flower and Fruit Characteristics: The length of bloom for 'Brunswick' is about three weeks when grown in Kentville, Nova Scotia, Canada in a matted row cultural system. Flowering for 'Brunswick' typically begins on June 2 and ends on June 21, which is about three days later than 'Cavendish' and four days later than 'Honeoye'. As shown in Table 2, the flower truss of 'Brunswick' is longer than for 'Cavendish' and 'Honeoye'. 'Brunswick' flowers typically open slightly beneath the leaf canopy. 'Brunswick' flower trusses produce more flowers than trusses of 'Cavendish' and 'Honeoye'. Flowers of 'Brunswick' and the reference varieties are white. The anther color is Yellow-Orange Group 17A. Secondary flowers of 'Brunswick' are similar to 'Honeoye' in size but larger than 'Cavendish'. Secondary flowers of 'Brunswick' typically have 5 or 6 petals while 'Cavendish' usually has 6 petals and 'Honeoye' has 5. The petals of 'Brunswick' are slightly longer than wide whereas petals of 'Cavendish' and 'Honeoye' are as long as wide. The inner calyx of 'Brunswick' has a smaller diameter than the outer calyx while for 'Cavendish' and 'Honeoye' the inner and outer calyces have a similar diameter. Trusses of 'Brunswick' and 'Honeoye' are typically semi-erect at first picking in contrast to 'Cavendish' which is prostrate. The position of the calyx is even with the top of the berry for 'Brunswick'. The adherence of the calyx to the fruit is weak to medium for 'Brunswick' and 'Honeoye' but strong for 'Cavendish'. The fruit of 'Brunswick' are slightly larger than for 'Honeoye' but smaller than 'Cavendish'. The ratio of fruit length to width is 0.82 for 'Brunswick', 0.92 for 'Cavendish' and 0.97 for 'Honeoye'. 'Brunswick' fruit are ovoid to short-conic in shape. Fruit of all three varieties are medium in firmness. As shown in Table 2, the exterior fruit color of 'Brunswick' is Red Group 46A and on the inside the pith and cortex are Red Group 45B, indicating very even interior color. The reference varieties have a very similar color to 'Brunswick'. The achenes of 'Brunswick' are Green-Yellow Group 1A but darken to Orange-Red Group 34A on the shoulders of the fruit when exposed to sunlight.

TABLE 2

Flower and Fruit Characteristics for 'Brunswick', 'Cavendish' and 'Honeoye'			
Cultivar			
Character	'Brunswick'	'Cavendish'	'Honeoye'
Flower position (relative to leaf canopy)	slightly beneath	beneath	slightly beneath
Flower truss length (cm)	medium 24.2	short-medium 20.4	short-medium 21.8
Number of flowers/truss	8.1	6.4	6.7
Number of petals	5.4	6.0	5.1
Flower size (mm diameter)	31.1	27.0	30.1
Flower color	White	White	White
Petal length (mm)	12.2	10.6	12.0
Petal width (mm)	11.6	10.5	12.0
Petal spacing	spaced to touching	touching to overlapping	spaced to touching
Calyx size			
Inner calyx (mm diam.)	24.4	22.8	23.1
Outer calyx (mm diam.)	26.7	22.4	23.8
Calyx position	even	even to in a basin	even to slightly above
Adherence of the calyx	weak to medium	strong	weak to medium
Fruit size and shape			
Length (mm)	28.1	31.8	29.9
Width (mm)	34.4	34.6	30.7
Length/width ratio	0.82	0.92	0.97
Subjective fruit shape	ovoid to short-conic	cordate	short-conic
Seed position	slight-indent	slight-indent	slight indent
Fruit firmness	medium	medium	medium
Color (R.H.S. Colour Chart)			
Calyx	Green Group 137C to 137D	Green Group 137C	Green Group 137C
Fruit exterior	Red Group 46A	Red Group 46A	Red Group 46A
Fruit interior	Red Group	Red Group	Red Group
Pith	45B	45B	45B
Cortex	45B	45B	45B

Disease Resistance: 'Brunswick' and 'Cavendish' are resistant to red stele root rot (*Phytophthora fragariae*) while 'Honeoye' is susceptible. 'Brunswick' plants are slightly more resistant to powdery mildew (*Sphaerotheca macularis*) than 'Cavendish' and

'Honeoye', which are susceptible. 'Brunswick' and 'Cavendish' are susceptible to green petal phytoplasma while 'Honeoye' is resistant.

Production Characteristics: 'Brunswick' has produced high yields; generally similar to 'Cavendish' and 'Honeoye', as shown in Table 3. The proportion of fruit considered marketable is similar between the three varieties. The fruit of 'Brunswick' are larger (by weight) than 'Honeoye' but smaller than 'Cavendish'. The mean harvest date for 'Brunswick' is similar to 'Cavendish' and 'Honeoye'. All three varieties have a harvest season which is early-midseason.

TABLE 3

Performance of 'Brunswick' and 'Cavendish' or 'Honeoye' in 1997 and 1998 Averaged over Several Sites*				
	Total Yield (t/ha)	%Yield marketable	Size (g/fruit)	Mean Harvest (day of year)
1997 (five sites)				
'Brunswick'	7.2	87.9	13.3	201.7
'Cavendish'	5.4	90.8	14.7	201.5
1998 (four sites)				
'Brunswick'	9.9	81.1	11.2	188.2
'Cavendish'	8.6	81.2	11.6	189.2
1998 (one site)				
'Brunswick'	17.1	94.2	12.8	181.0
'Honeoye'	15.8	96.1	10.8	182.8

* Kentville NS, Charlottetown PEI, Fredericton NB, Buctouche NB, and Pynn's Brook Nfld. Plants were grown in matted rows and three blocks of 3m long rows were harvested at each site.